

## ARSG Gladstone Work Group Meeting

Miner's Union Hospital, Silverton, CO; 10:00 AM, May 2, 2007

Present: Bill Simon, Peter Butler, Steve Fearn, Todd Hennis, Camille Price, Kirsten Brown, Stephanie Odell, Rob Robinson, Bruce Stover, Bill Owen, Sabrina Forrest, Jerry Goedert, Jan Christner, Stan Powers, and Ali Morse.

### 1. Review of data and data analysis for

- **Permit status** – Sunnyside Gold Corp (SGC) started treating Cement Creek (CC) in 1996 to ameliorate increasing temporary increases in other areas and provide water quality (WQ) standards at A72. Consent decree was terminated in spring 2003 and treatment was terminated June 2003, after which there was a noticeable increase of zinc in CC.
- **A72 & CC48** – A72 shows spikes in 2003-05 due to CC (since A68 does not have them). Manganese is not exceeding WQ standards, so focus on zinc. Spikes at A72 likely due to spikes in CC. High zinc loads occur during low flows. At CC48, flow and seasonality corrections were not done due to high variations in treatment quantities, and therefore high variability.. Load flat spot on graph Oct. 04 – Oct. 05 may be due to Mogul bulkhead and dilution. Spring runoff helps reduce zinc.
- **Gladstone area and the mines proposed to be treated**  
Red & Bonita (R&B), Gold King 7 (GK), Mogul, and American Tunnel
- **Data gap identification**  
Due to continuing variability, flow rates and water quality samples need to be taken every other month at the mines until a treatment plant is built.. BLM, DRMS & EPA can help with funding. Upper GK not well understood—Todd agreeable to have flume or data logger installed.

### 2. Water Treatment Assessment Report

Water treatment plant (WTP) locations: Gladstone or Success placer; sludge to be disposed off site to Bondad, Lake Emma, or unidentified site near Silverton (all quite expensive but near Silverton the least). Reinstallation of 1.1 acre pond system is less expensive—building & equipment still there. Can do some remote monitoring but a greater O&M costs if it's a 24/7 operation. The group thought it is unnecessary to repeat modeling of treatment effects at A72 and CC48, at least for this year. Continue evaluation of locations of WTP. Geotech can assist with potential locations.

Todd presented Ionic Water Technologies option. Pilot demonstration project to be researched. Todd wants an AOS between parties and suggested forming a non-profit. He would like to help develop a lower cost lime treatment system, including settling ponds, on his property (Anglo Saxon claim), that could start by treating the Gold King drainage and expand in time from there. The idea seems worth exploring, especially using some new technology he presented.

### 3. London Mine treatment system discussion

Talk to Jim Herron re: similarities and differences.

**4. BLM assessment of operator/owner alternatives**

Rob Robinson gave a detailed presentation on a report written by the San Juan County attorney (funded by BLM) that rated various different owner/operator alternatives for a treatment plants. Many alternatives were presented but only 2 or 3 appear to be a possible fit.

**5. Red and Bonito bulkhead option was discussed** – Bruce Stover will look into geological mapping; Todd will try to get some mine maps.

**6. Other issues**

- **Fund raising** – overall funding from BLM, Central Hazmat Fund (CHF), AML, Gold King, Trout Unlimited, RM Elk Fdn, ASARCO, and SSG are likely to be explored. Set up trust to pay for ongoing treatment. Capital likely easier to get than operating cost.
- **Treatment modeling** – based upon opinions of previous modelers (USGS) and water quality analyses in recent years it was decided that re-doing the tracer and model would serve little purpose at this time.

**7. Where do we go from here: Action items**

- a) A72, CC48 written report – 319
- b) document all samples from Gold King (Jerry confirm Steve, Bill)
- c) improve URS presentation colors & font size (Jerry)
- d) Owen's presentation – date all SGC actions
- e) Ionic Water Tech pilot project (Todd & Jerry—report back ASAP)
- f) water sampling at Gold King/Mogul/R&B/AT every other month-method, funding.
- g) sonic sludge treatment info (Bill & Jerry)
- h) URS report – integrate low cost alternative as an Addendum